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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/553,085

10/11/2005

Shintaro Okada

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SONNENSCHN NATH & ROSENTHAL LLP

P.O. BOX 061080

WACKER DRIVE STATION, SEARS TOWER

CHICAGO, IL 60606-1080

EXAMINER

SHIKHMAN, MAX

ART UNIT

PAPER NUMBER

2624

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/553,085

**Applicant(s)**

OKADA ET AL.

**Examiner**

MAX SHIKHMAN

**Art Unit**

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on 11 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 October 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-85/86)  
Paper No(s)/Mail Date 05/02/2007 10/11/2005
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Inventor's Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to because S2 & S12 use, "around", which implies pixels surround C as a rectangle. This conflicts with Fig 3 and spec P9 line 12, "adjoin in the horizontal direction". In S2 & S12, change "centered around" to --adjoin in the horizontal direction as in Fig 3--.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 101***

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 5,6 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

In Claim 5 change, "*A recording medium having a program*", to --A computer readable medium storing a program--.

In Claim 6 change, "A program", to -- A computer readable medium storing a program --.

### ***Double Patenting***

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thornton*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claim 1 provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/805207.

Claim 4 provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 4 of copending Application No. 10/805207.

Claim 5 provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 10 of copending Application No. 10/805207.

Claim 6 provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 11 of copending Application No. 10/805207.

Although the conflicting claims are not identical, they are not patentably distinct from each other because they disclose the same operation.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim **1,4,5,6; 2,3** rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuchiya PG PUB-DOCUMENT-NUMBER: 20010038716 in view of Nakajima, PG PUB-DOCUMENT-NUMBER: 20040008902.

**( ) Regarding Claims 1,4,5,6:**

(Note: *signal of attention*= $x_n$ , *predetermined threshold value*= $\varepsilon$ , *weight*= $a_k$ )

1. A signal processing apparatus for adjusting levels of continuously arranged signals, said signal processing apparatus characterized by comprising:

*designation means* (5) for designating the continuously arranged signals as a signal of attention ( $x_n$ ) one by one; (Formula 1:  $n$ )

*determination means* (5) for determining a predetermined number of signals preceding (Formula1:  $k=-N$ ) the signal of attention designated by the designation means, and a predetermined number of signals following (Formula1:  $N$ ) the signal of attention, to be neighbouring signals; (Formula1)

*weight average means* for averaging by weight ([0032]. Formula 1:  $a_k$ ) the signal of attention and the plurality of neighbouring signals; ([0032]. Formula 1:  $w_{n-k}$ )

*flag setting means* for calculating a difference in levels between the signal of attention and a neighbouring signal, (Formula1:  $|x_n - x_{n-k}|$ )

*judging whether or not the difference* (Formula1:  $|x_n - x_{n-k}| > \varepsilon$ ) is larger than a predetermined threshold value, ( $\varepsilon$ ) and raising flags (output of 33) for the neighbouring signal<sup>1</sup> with respect to the signal of attention, when the difference is judged to be larger than the predetermined threshold value;

(Formula1: when  $|x_n - x_{n-k}| > \varepsilon$ ,  $w_{n-k} = x_{n-k}$  )

*and control means (5) for controlling and causing the weighted average means to average by weight, (Formula1) using the signal of attention instead of the neighbouring signal ([0034] "ignoring the pixel value  $x_{n-k}$ ") for which the flag is raised. (output of 33)*

*Tsuchiya discloses everything as described above except, <sup>1</sup>and a neighbouring signal which are arranged symmetrically.*

Nakajima discloses, [0034] "...1" is output from the AND circuits 12 when both of absolute values of differences between level values of combined pixels and the watched pixel are smaller than the reference level". [0042] "using only pixels which are both selected and thereby performing the averaging operation, an averaged signal phase is not deviated from the original position of the watched pixel and moreover, the possibility that generated image edges are disordered can be canceled."

As Nakajima discloses, both pixels symmetric about a watched pixel are subtracted from the watched pixel; if the difference for either subtraction calculation is more than theta, both pixels are not used in the average. This allows for unchanging signal phase.

**( ) Regarding Claim 2:**

*2. The signal processing apparatus as described in claim 1, characterized in that said flag setting means further raises a flag (Tsuchiya. output of 33. Nakajima's output of 11) for a neighboring pixel away, (Formula1:  $|x_n - x_{n-k}| > \varepsilon$ ,  $k = \{-N \dots N\}$ ) in view of the pixel of attention, ( $x_n$ ) from the neighboring pixels raised with flags.*

**() Regarding Claim 3:**

*3. The signal processing apparatus as described in claim 1, characterized in that said signals are pixel values of pixels constituting an image. (Fig1. [0028] "pixel value")*

**Conclusion**

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MAX SHIKHMAN whose telephone number is (571)270-1669. The examiner can normally be reached on Monday-Friday 8:30AM-6:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JINGGE WU can be reached on (571) 272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Art Unit: 2624

Supervisory Patent Examiner, Art Unit 2624